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ABSTRACT

Although the phenomenon has long been observed that women enter all types of post-secondary education at lower participation rates than men, there have been few attempts to analyze the reasons for this. These barriers may be categorized as (1) institutional, (2) situational, and (3) dispositional. Institutional factors that serve to exclude women from participation in post-secondary education include admissions practices, financial aid practices, institutional regulations, types of curriculum and services adopted, and faculty and staff attitudes. Situational barriers that deter women from participation in further education include family responsibilities, financial need, and societal pressures. Dispositional barriers that prevent women from continuing education include their fear of failure, attitude toward intellectual activity, role preference, ambivalence about educational goals, level of aspiration, passivity, dependence, and inferiority feelings. References are included. (Author)

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RESEARCH BULLETIN

BARRIERS TO WOMEN'S PARTICIPATION IN POST-SECONDARY EDUCATION

A REVIEW OF THE LITERATURE

Ruth B. Ekstrom

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Educational Testing Service
Princeton, New Jersey
October 1972

Barriers to Women's Participation in Post-Secondary Education

A Review of the Literature

Ruth B. Ekstrom

Abstract

Although the phenomenon has long been observed that women enter all types of post-secondary education at lower participation rates than men, there have been few attempts to analyze the reasons for this. These barriers may be categorized as (1) institutional, (2) situational, and (3) dispositional.

Institutional factors that serve to exclude women from participation in post-secondary education include admissions practices, financial aid practices, institutional regulations, types of curriculum and services adopted, and faculty and staff attitudes. Situational barriers that deter women from participation in further education include family responsibilities, financial need, and societal pressures. Dispositional barriers that prevent women from continuing education include their fear of failure, attitude toward intellectual activity, role preference, ambivalence about educational goals, level of aspiration, passivity, dependence, and inferiority feelings.

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Barriers to Women's Participation in Post-Secondary Education[1]

A Review of the Literature

Ruth B. Ekstrom[2]

Although more young women than young men complete secondary school, fewer women than men participate in educational programs beyond the secondary school level. For example, "among students capable of college level work, 65 percent of the men enter college and 45 percent graduate. Among women of comparable ability, only 50 percent enter and 30 percent graduate (Pullen 1970)." At the graduate study level, it has been found that women comprise 51% of the full-time graduate students in modern language departments, but they receive only 33% of the Ph.D.'s granted by these departments (MLA 1971). Other fields show similar results. How can this be explained?

One group of explanations may be found within the educational institutions. Some have policies that deliberately and actively discriminate against women. Others simply have failed to attract women because they have neglected to consider whether their policies might act as barriers. Second, particular life situations of women may prevent their taking part in educational programs even though they would like to do so. And third, barriers must be acknowledged to exist within the women themselves. As a consequence of certain social and psychological experiences, some women feel that education is not important or practical for them.

In this paper many of these obstacles will be examined. The first section will deal with institutional barriers, the second and third sections with the

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situational and dispositional barriers. These diverse influences are not always independent of each other and often do interact synergistically. The result constitutes a tremendous loss of talent and ability for our society.

This review was prepared as background for the development of questionnaires to be sent to a national sample of women and of post-secondary educational institutions. Consequently, the emphasis is upon recent practices and not on those which existed in the past. It is hoped that the questionnaires will reveal situations which can be changed through legislation or better educational planning. Consequently, the institutional and situational barriers to women's post-secondary education are emphasized in this review and the dispositional barriers given less attention. A number of other topics peripherally related to the major emphasis of this review (e.g., the employment of women, career development, sex-differences, etc.), are omitted except as they bear directly upon the main topic. Unfortunately, there is very little literature relating to post-secondary programs that are not part of higher education; for example, nothing has been published on the problems of women attending proprietary schools, consequently, most references are to research in higher education.

INSTITUTIONAL BARRIERS

There are five major aspects of institutional factors that tend to exclude women from continuing education: (1) admissions practices, (2) financial aid practices, (3) institutional regulations, (4) deficiencies in curriculum planning and student services, and (5) faculty and staff attitudes.

The Newman Report (1971) also recommended reforms "which will remove the barriers to women which are built into the institutional structure of higher education:

> Requirements for residency, full-time enrollment, credit transfers and the like should be overhauled to accommodate the needs of many women for flexible scheduling.
>
> Student aid programs and credit arrangements--which are often administered to conform to the requirements mentioned above--must be similarly redesigned with women in mind."

Admissions Practices

It is in the area of admissions policies that the most obvious discrimination exists (Kayden 1970). Many institutions have quotas for the number of women to be admitted. Others refuse admission to mature students, male or female, or to part-time students. Many schools are reluctant to accept transfer students or, alternatively (and more frequently) to accept transfer credits. A number of institutions, especially proprietary technical schools, refuse to admit women to programs in "inappropriate" fields--i.e., fields where, traditionally, few women have been employed and where, as a consequence, job placement may be difficult.

Sex restrictions. One of the most frequent charges of discrimination against women students is that admissions standards are higher for women than for men. Some supporting data, both direct and indirect, are now available.

For example, studies of entering college freshmen over the past four years (ACE 1968 through 1971) consistently showed that more than 40 percent of the women, but only about 20 percent of the men, admitted to four-year public colleges, had a B+ or better average in high school. This same survey showed that the women admitted to college not only had higher grades than men, but also ranked higher in their class, and were more likely to have been high

achievers in all types of extracurricular activities except science contests and varsity athletics. Werts (1966) also found that women with relatively low grades were much less likely to attend college than men with equally low grades.

Walster, Cleary, and Clifford (1971) studied discrimination at 240 colleges and universities. Each college was sent an application randomly assigned to race, sex and ability level. At each ability level, application information was held constant except for race and sex. They found that males were markedly preferred over females in admissions at the low ability level, but that this difference disappeared at the medium and high ability levels. They concluded that "since there are more young people, both male and female, at the lowest of our ability levels than at the higher levels, it is clear that, overall, women are discriminated against in college admission. The significant sex-by-ability interaction is in accord with the feminist observation (and complaint) that only a truly exceptional woman can ever hope to transcend sexual stereotypes and to be judged on an objective basis. A woman with more modest abilities continues to be judged as first and foremost a woman, and thus an 'inferior.'"

A system of admissions quotas by sex usually operates to the detriment of women. At Princeton University in 1970 (NOW 1971), only 14 percent of the female applicants, but more than 22 percent of the male applicants, were admitted. Moreover, the women who entered Princeton in 1970 were more academically able than the men, according to a survey made of this entering class.

> Ninety-seven percent of the entering women had high school grade averages of B+ or above. The same was true of only 86.5 percent of the men. None of the female respondents reported an average below a B. Four and two-tenths percent of the males did. As the Alumni Weekly concluded from this and other data in the report...."on the

> whole, Princeton's women are smarter than the men." One might also conclude that some of the women who were not admitted were "smarter" than some of the men who were.

Princeton has, and reportedly intends to continue, a quota system that will limit the number of women admitted regardless of how much better qualified they are than male applicants. This university and many other newly coeducational institutions justify the quota system in two ways: (1) the supposed differences in the courses elected by men and women and (2) the resulting changes necessary in the faculty.

National data (ACE 1968-1971) show that entering women students are more interested in the humanities and less interested in the sciences than men. However, this situation does not hold true for all colleges. For example, when the freshmen entering Princeton in the fall of 1970 were asked to state their probable major field, the differences were not of the size and sort predicted (6.7 percent of the women, but only 3.9 percent of the men, expressed interest in the biological sciences; and 12 percent of the women, but only 6.1 percent of the men, chose mathematics or statistics as their probable major). This suggests that care should be taken in generalizing from national data to any particular college, especially when such generalizations may act as barriers to the admission of women (or any other group).

Discrimination against women occurs both in the admissions practices of public institutions as well as those of private ones. Several examples were cited in the 1970 Hearings of the Subcommittee on Education of the House of Representatives (Discrimination Against Women, 1970). At the New York State School of Agriculture at Cornell University, where there are also quotas for the admission of women, the SAT scores of women entering the school averaged 30 to 40 points higher than scores of men. Quotas for the admission of women

at the University of North Carolina at Chapel Hill resulted in one-fourth of the female applicants being accepted, but half of the male applicants. At Pennsylvania State University, a male is five times more likely to be accepted than a female. According to Murray (1970), "Official segregation of the sexes serves the function of maintaining the privileged position of the dominant male group. Some state universities have segregated or excluded women students on the ground of sex." She cited the federal court decision in Kirstein vs. The Rector and Visitors of the University of Virginia, which concluded that exclusion of women from the University of Virginia at Charlottesville violated women's constitutional rights under the equal protection clause of the Fourteenth Amendment.

Cross (1971), too, pointed out that the arbitrary sex quotas of many colleges operate in a discriminatory manner since they place a ceiling on the number of qualified women admitted, but allow the admission of men with lower qualifications.

The existence of admissions quotas for women can affect the success of educational programs, according to Bunting, Graham, and Wasserman (1970). These authors pointed out that "the benefits of coeducation for both sexes depend upon a substantial rather than a token number of women in the student body and the greater the imbalance, the greater the adverse effects on both sexes."

Considerable additional data are available on differential admissions standards for men and for women, from sources such as The College Handbook (CEEB 1969) or from the charges that have been brought against colleges and universities by organizations such as the Women's Equity Action League (WEAL) and the National Organization for Women (NOW). The problems of sex-quotas seem to arise primarily when colleges wish to admit women in a token rather than in an equal manner or on an equal basis with male students.

These criticisms are not an attack on the single-sex college that has chosen to design an educational program for men-only or women-only. In fact the women's college may offer one of the few opportunities available to females today to participate in higher education free from the strong male influence that predominates at coeducational institutions. Women's colleges may be the only educational institutions currently in a position to offer a feminist education. Cole (1972) has pointed out, "Not all women seek the so-called male viewpoint in their college classes. Some women want to develop at their own pace, to have a curricular and extracurricular setting that meets their needs and interests primarily, not secondarily." He quotes a recent publication of the Southern Association of Colleges for Women:

> Most women never experience first-class citizenship because they never elude the male-dominated society long enough to discover themselves as persons. Coeducational campuses have yet to prove that they regard coeds as much more than social conveniences for men and financial necessities for the college.

Other authors (Millett 1969; Husbands 1972) have, however, contended that single sex colleges offer women separate and unequal educational opportunities. They state that women's colleges offer a relatively low level of academic quality when compared to men's colleges or coeducational schools. However, these views have been challenged on several points.

At the graduate school level, Hunter (1967) found that 68% of the women but only 54% of the men had an undergraduate grade average of B or better. In many graduate and professional schools the "equal rejection rate" treatment of applicants appears to be a common one. The equal rejection rate occurs when male and female applicants are sorted into separate categories and equal proportions of each group are rejected. At the Harvard Graduate School of Arts and Sciences, in 1968-69, women made up 26.5 percent of those applying and 24.6 percent of those admitted; at the University of Chicago Graduate School, women

were 41 percent of the applicants and 40 percent of the entrants; at Berkeley, 31 percent of the applications and 29 percent of the admissions went to women (Harvard 1970; Chicago 1970; Berkeley 1970). It may be that the lack of effort to recruit women applicants for graduate programs is a greater barrier to their participation at this level than any application of admissions quotas.

The equal rejection rate often results in the acceptance of men less well qualified than many of the rejected women. In testimony before the House Subcommittee on Education (Discrimination Against Women, 1970), Dr. Frances Norris stated that in interviews with 25 admissions officers at northeastern medical schools, 19 acknowledged that they accepted men in preference to women unless individual women were demonstrably superior. She concluded that separating male and female applicants into discrete categories, and rejecting an equal percentage meant that "women rejected from the small female applicant pool were equal to or better than men accepted and that they were rejected because their sex quota was filled." Komarovsky (1966) has also charged that professional schools often admit inferior male applicants in preference to superior women.

In commenting on the equal rejection rate, the Harvard Report (1970) stated that "if women applicants are a more highly pre-selected group, they may be a more able and more highly motivated group. Equal treatment of sch a group would result in the acceptance of a higher percentage of them."

Among reasons advanced by colleges and graduate schools for restricting the number of women admitted are these: (1) women are more likely to drop out of school and not complete their education, and (2) women fail to use their education after they have received it. Ann Sutherland Harris (1970) has presented a convincing argument that attrition rates for a course of study are not very different for the two sexes. "Studies also indicate that the attrition

rate for both sexes is higher in the humanities and social sciences than in the physical sciences and professional schools. Since women are more often found in the former two fields, their overall attrition rate is higher than that of men, but when figures are compared by field, the differences are small." Some institutions count all students who do not complete their education there as dropouts. Thus women who move often with their husbands are more likely to be counted as dropouts whereas they may complete their studies elsewhere.

The study of women doctorates by Astin (1969) found that 91 percent of the 1,958 women who received their doctorates in 1957-58 were employed; this strongly suggests that the "failure-to-use" argument is fallacious at least at this level of education. Another study of 1,764 women Ph.D.'s who received their degrees between 1958 and 1963 (Simon, Clark, & Galway 1967) also found the rate of employment of women Ph.D.'s to be high; 96.37% of the unmarried women, 90.7% of the married women without children, and 83.8% of the married women with children worked. Moreover, the scholarly productivity of the women Ph.D.'s was comparable to that of men. Of the men, 57.5% had published at least one article; in comparison, 57.9% of the unmarried women, 66.2% of the married women, and 63.9% of the women with children had published at least one article.

Age restrictions. A second and perhaps less frequent type of discrimination in admissions is the reluctance or refusal of schools to admit students who are over a certain age, typically 35 or 40. Lyon (1964) stated that a number of universities refuse to accept women over age 35 for graduate programs. While such an admissions policy ostensibly discriminates against both men and women, women are much more likely to be affected. This is often because women interrupt their education for marriage and while caring for young children. They realize only after their children reach school age that they would like to return to school.

There is evidence that many women do not attend college or school until they reach the middle years of life (about age 35 or 40). For example, Johnstone and Rivera (1965) found that, while rates of participation in adult education were lower for women than for men before age 35, they were virtually identical for men and women after that age. At any age level or at any stage in the life cycle, however, men were more apt than women to be enrolled in courses for credit. Women were more likely than men to take their first adult education course after age 40. Hunter (1967) reported that 6% of male graduate students but 16% of women did not begin graduate study until 10 or more years after receiving the baccalaureate. He also reports that the proportion of graduate students receiving financial aid decreases with age.

In a study of mature women students, Lord (1968) studied 28 women age 40 or over who received the doctorate from the University of Wisconsin between 1963 and 1968. She found that 21 percent decided to pursue doctoral study when they were between ages 35-39, 36 percent between 40-44, and 18 percent between 45-49. Age restrictions on doctoral study would have prevented these women from obtaining their goals. The Modern Language Association (1971) survey found that about 40% of these graduate departments had policies regarding the enrollment of older students.

In a review of the literature on mature women in doctoral programs, Randolph (1965) found age discriminatory practices in admissions. She stated that many universities have a policy to "discourage" women applicants who are 35 years of age or older from a doctoral program. She also talked with faculty and administrative officers at institutions offering programs in continuing education for women. In discussions with department heads and graduate school deans, she was told that regardless of sex, applicants over age

40 were not encouraged in any program that might require as many as four or five years to complete. One graduate school dean stated that at 35 "a woman was much older than a man." Another said that a woman at 45 was "entering the throes of the menopause and thus would be useless to the profession." As a result of her study Randolph concluded that "age must not be a factor prohibiting admission to a program." Blackwell (1963) discussed the difficulties of adult women seeking admission to college. "Some college trustees and administrators seem to have a built-in adolescent bias," he concluded.

Part-time study. Discrimination in admissions also occurs when schools refuse to accept part-time students. Although this practice applies to both men and women, women are much more likely to be affected because of their family responsibilities, as this review will demonstrate in a later section dealing with situational barriers.

A study of 4,149 women who were the wives of students, faculty, and staff at the University of Illinois (Hembrough 1966) showed that 80 percent of the wives not attending class and 50 percent of those attending class said that part-time enrollment was or would be necessary for them either to matriculate or continue in school.

"Part-time study must be recognized as natural, desirable and just as effective as full-time study," according to Cless (1969).

Cohen (1971) recommended that "part-time study programs to facilitate continuity education for women should be initiated or expanded." Part-time programs are especially important to married women. Bunting, Graham, and Wasserman (1970) stated that although Harvard no longer has any rule against part-time graduate students, some department staff or heads still tell applicants that there is such a rule. Riesman (1965) said that we "need

enormously greater flexibility for part-time study. There are many graduate institutions which won't allow people to take degrees part time, a tacit form of discrimination, which is hard on married women and on working wives." Myers (1964), in discussing problems encountered by mature women undergraduates, pointed out that since many women with husbands and children must attend college either part-time or not at all, they "simply cannot carry a full-time schedule and do justice to it."

Lefevre's study (1972) of 35 mature women graduate students at the University of Chicago concluded that "accepting degree students on a part-time basis, funding part-time study, and examining scholarship and loan policies with the needs of women with children and of older as well as younger students in mind would enable more women to remain in school throughout the child-bearing years or to return to school earlier." The Modern Language Association (1971) found that 39% of the departments they surveyed prohibited part-time graduate study.

Transferring credits. Difficulty in transferring credit from one institution to another is a problem that mobile students often face. Again, although such problems affect both sexes, they are aggravated for women, who often feel obliged to move whenever a husband's employment necessitates it. Men are usually more able to control their mobility.

"Women with previous college courses often find universities unwilling to accept transfer credit," according to Pullen (1970). This has been documented by other authors. Ruslink (1969), for example, found that difficulties in transferring credits was a problem encountered by married women who resumed education to prepare for teaching jobs. In New Jersey, where her study of 288 married women students was made, restrictions had been imposed, because of the shortage of classroom space, on the number of qualified transfer students

admitted to the state colleges. Shoulders (1968), in a study of 187 women over age 22 attending junior colleges in Missouri, similarly found that transfer of courses presented a problem.

Cless (1969) also commented on the difficulties in transferring credits:

> The unacceptability of tested knowledge obtained at another institution is justified parochially as protecting the ethos of a specific college's degree. Ethos is expendable. Education cannot depend upon sentiment. Accreditation is the official seal of approval issued to educational institutions by one of six Regional Accreditation Commissions of Higher Education, composed of educators from that specific region. These six watchdogs of academic quality are linked in a national federation where, one gathers, fairly uniform standards of academic quality are agreed upon. Given these circumstances of voluntary submission to the periodic scrutiny of one's peers, it might be expected that credit for similar courses at different institutions would be automatically interchangeable among accredited colleges or universities; that prerequisites for advanced courses would be mutually acceptable; that requirements for the field of concentration would be similar. The fallacy of this assumption would seem to lie in its simplicity. The educational penalty for mobility is not simple.

Myers (1964) recommended the modification of such rules as those at Temple University which disallowed transfer credit for courses completed more than ten years before date of admission. Validation of these transfer credits through examination or through the successful completion of a more advanced course in the same subject area is one possible solution.

Policy changes in admissions at both the undergraduate and graduate levels were recommended by Cohen (1971). She stated that these policies "should be redesigned so as not to penalize qualified women returning after an absence of several years. Credit transfers, residence requirements, even application forms and testing procedures, should reflect new concern for individual situations and be designed to encourage women applicants."

Job placement. A final type of admissions discrimination, occurring most often in vocational schools and proprietary institutions, is the refusal to admit a woman to a particular course, department, or program because it is

assumed that there will be difficulty in job placement when the academic work is completed. A similar situation has existed in professional programs in such areas as engineering.

Financial Aid Practices

Lack of money is one of the greatest barriers to all types of postsecondary education for both men and women. When financial aid practices are based on variables other than need, the less affluent may find their access to continuing education barred. The extent of financial need will be described more fully under situational barriers.

Women have been denied equal access to financial aid for post-secondary education because of institutional practices such as: (1) making scholarships, fellowships, and loans more available to men than to women, (2) restricting financial aid to full-time students, (3) withholding financial aid from women who are married or pregnant or already mothers, (4) failing to provide deferred payment plans, (5) not offering financial aid for child care and other expenses, (6) limiting employment opportunities for women, and (7) imposing different cost bases or charges for male and female students or for part-time and full-time students.

Sex bias in awards. There is evidence at both the institutional and national level that women are less likely to receive financial assistance. The material related to the institutional aspect of this problem was presented earlier. According to testimony in the House of Representatives Subcommittee on Education Hearings (Discrimination Against Women, 1970), nationally women were 33 percent of the graduate students in 1969, but they received only 28 percent of the graduate awards under NDEA Title IV and 29 percent of the awards under NDEA Title VI. Hunter (1967) reported that 39% of male graduate students

received financial aid but only 37% of female graduate students held such stipends.

Actual discrimination in the awarding of financial aid has been documented in one study by Haven and Horch (1972). In a national survey of 3,363 students who were college sophomores in 1969-70, they found the average award to men to be $1,001, but to women, $786. There were no significant differences in the socioeconomic status of the men and the women; moreover, about the same percentages of both sexes had family incomes below $10,000. The average institutionally administered scholarship or grant was $671 for men and $515 for women. Term-time jobs that were awarded as part of institutional financial aid packages paid an average of $712 to men and only $401 to women. The only area in which women received more money from colleges than men did was loans: the average college loan to women was $491, to men, $303. Although comparable proportions of men and women were in debt for college, the mean debt for women exceeded that for men in all types of institutions.

A significant number of scholarships, fellowships, and loans may be sex-restricted in the older private colleges that were founded for the education of men. Many of these institutions have only recently begun to admit women and limit the number of female students. These colleges may be slow at attempting to provide comparable financial aid for the opposite sex so that there may be restitution for the inequities created by endowed sex-specified scholarships.

The Report of the Subcommittee on the Status of Academic Women on the Berkeley Campus (1970) found that women graduate students encountered difficulties in getting financial aid for a number of reasons. These women reported being told by faculty that women students were not serious enough to receive financial aid, that women students must be more qualified than men if they

were to receive financial aid, that women students were more likely to drop out and thus should not receive financial aid, and that age, marital status, and/or motherhood disqualified them from receiving financial aid. The Berkeley study describes several ways in which women were discriminated against in the distribution of financial aid. "A detailed study of one social science department showed that divorced women receive more aid than married women, and that least aid went to women with children."

Eleanor Dolan (1963), in discussing the financial needs of mature women students, stated that "Lack of money has been a limiting factor.... Pretty generally there has been a reluctance to grant women scholarships, fellowships, or assistantships partly because the discontinuity in women's use of advanced training has not been properly evaluated."

Murray (1971) described the discrimination against women students at N.Y.U. Law School and discrimination in the awarding of scholarships at Cornell.

> The Women's Rights Committee of the New York University Law School submitted a statement pointing out that until the women's group pressed for reforms in 1969, N.Y.U. had totally excluded women, for more than 20 years, from the prestigious and lucrative Root-Tilden and Snow Scholarships. Twenty Root-Tilden Scholarships worth more than $10,000 each were awarded to male "future public leaders" each year. Women, of course, can't be leaders, and N.Y.U. contributed its share to making that presumption a reality by its exclusionary policy. A similar charge against Cornell University stated that the Cornell catalogue lists scholarships and prizes open to Arts and Science undergraduates totalling $5,045 annually to be distributed on the basis of sex. Women are eligible to receive only 15% or $760 of this amount compared with $4,285 for men.

Another area of restriction of scholarship funds to males only occurs in the granting of athletic scholarships. Women athletes rarely receive any financial aid, but aid to male athletes is common. In many institutions, a significant proportion of the financial aid available is earmarked for male athletes.

Still another type of sex-restricted financial aid can be found in government programs designed to attract students to the military. ROTC, NROTC, and the Service Academies do not offer young women the same opportunities as young men to obtain education at government expense. Additionally, women have less access to the veteran's benefits available to many men because the enrollment of women in the military is limited by statute.

One of the arguments presented for not giving women students equal opportunities for financial aid is that women have a higher dropout rate than men. As was mentioned earlier, Harris (1970) indicated that this may be an artifact created by the kinds of fields in which women students are typically enrolled. The Harvard Study (1970) found that "women are not now nor were in the past dropping out at a higher rate if given equal scholarship opportunities."

Lack of financial aid for women may help to explain why fewer women than men obtain the doctorate (Eckert & Stecklein 1961). Riesman (1965) suggested that the lack of financial aid for women also may be due to fears on the part of faculty members that a woman will not serve "the professor himself as a disciple" as might a man.

Goodwin (1966) suggested that funds should be channeled into the support of scholastically superior women "in an effort to ease some of the financial stress that occurs between family commitments and educational requirements."

Financial aid is particularly justified for lower class women because the ultimate financial benefits resulting from a mature woman's return to school are inversely proportional to the family financial status (Ruslink 1969). Ruslink found financial factors to be a particularly significant hindrance for lower class women.

Cope (1970) found that, although family income had no effect on the attrition rate of men, women from homes with an annual income of less than

$10,000 dropped out of college more frequently than did women from wealthier families. This suggests that inequities in granting financial aid to women may cause women from less affluent families to drop out of college.

Restriction of aid to full-time students. The dearth of scholarships or fellowships for part-time students, although it creates barriers for both men and women, serves as a more major barrier for women. National Defense Student Loans are not available to students enrolled for less than half time. Educational Opportunity Grants and College Work Study are available only to full-time students. According to Kayden (1970), "The existing legislation limits eligibility for subsidized loans and grants to those who are enrolled as either full- or half-time students. A married woman with young children may not be able to attend school on a full- or even half-time basis, so even if she were willing to borrow money, in all likelihood she would not be able to receive the assistance available to others."

In a statement made at the House of Representatives Hearings (Discrimination Against Women, 1970), Dr. Bernice Sandler commented on the failure of scholarship programs to provide for part-time students:

> Practically all Federal scholarship and loan aid is for full-time study--a practice that works to virtually eliminate married women with families from receiving such aid, since they need a part-time schedule. Indeed, many schools forbid or discourage part-time study, particularly at the graduate level, thus punishing women who attempt to combine professional training and home responsibilities simultaneously.

In a review of the literature that relates to policies that serve as barriers to women in doctoral programs, Randolph (1965) cited several studies that have considered the problems of financial aid. She urged more financial help, fellowships, scholarships for part-time students and the publicizing of such assistance through mass media and community organizations.

Komarovsky (1966) has said that colleges and universities must rescind the rule that part-time students are ineligible for financial aid. Ruslink (1969) has also mentioned that more financial help, fellowships, and scholarships should be made available to the part-time student.

The lack of financial aid for part-time students indicates that many potential participants in continuing education are unable to attend schools (Hembrough 1966).

The A.W.A.R.E. scholarships for mature women with their provision of junior college education were described by Jacobson (1967). She quotes Russell Lewis, director of the evening division of Santa Monica City College, as saying, "In the main, scholarships have been for full-time students, and this does reduce the number of married women who are eligible, since most of them are not full-time students." Lack of financial aid for part-time students was cited by junior college women as a major difficulty, in a study by Shoulders (1968).

Mitchell (1969), in summarizing the literature relating to the woman doctoral candidate, has said:

> There is more and more insistence that women be given financial assistance for their studies and that part-time study be recognized as legitimate in establishing eligibility for fellowships, scholarships, and loans.
>
> Institutions of higher education are being challenged to remove those restrictions which discriminate against mature women who wish to study for the doctorate, and their personnel are asked to receive these women without prejudice.

The report on women at the University of Chicago (1970) stressed the need for special funds designated for the support of part-time students. The data from that institution showed that 71 percent of the men, but only 66 percent

of the women who were graduate students had scholarships or fellowships; 29 percent of the men and 26 percent of the women had received loans.

Pregnancy and marriage. Women at some institutions have been refused financial aid because of pregnancy or marriage, according to Tobias at the Cornell Conference (1969). The report on women at the State University of New York at Buffalo recommended that "No women shall be denied equal scholarships or financial aid on the ground of sex, marriage, or possible marriage, pregnancy or possible pregnancy (Scott 1970)."

In comments made by students during the Berkeley study (1970), an incident is described in which a professor cut off funds to a married graduate student in the biological sciences when she became pregnant. He is quoted as saying to the student: "You should be home caring for your family."

Deferred payments. The need to break educational rigidities is emphasized by Ruslink (1969) as a means of making it possible for mature women to return to school. She suggested that the initiation of deferred payment plans would be beneficial. Insistence by institutions that students pay the entire costs at the time of enrollment, rather than in a series of payments spread over the time of the course of study, makes attendance at all types of continuing education programs more difficult for the low-income student of either sex, but especially for women who, in our society, often have less access to money.

Aid for child care. Women students often need other forms of financial aid than just those covering tuition costs. Shoulders (1968) has mentioned that financial aid specifically for child-care expenses is needed, especially by poor women attending schools that do not provide child-care facilities. Paul, in describing Project Second Start (personal communication), a program for low-income women over age 30 attending public educational institutions,

has mentioned that financial aid for books, carfare, meals away from home, and child care may be necessary.

Goodwin (1966), after a study of women doctoral candidates, recommended that "funds should be channeled...to ease some of the financial stress that occurs between family commitments and educational requirements. Stipends should be made available which are intended to provide women with the financial resources to buy the 'time' to pursue graduate study while maintaining their domestic responsibilities."

Employment. The woman student often receives less help than her male counterparts in finding part-time employment, according to the reports from groups at Berkeley (1970) and the University of Chicago (1970). The Chicago survey stated that 30 percent of women students, as compared to 36 percent of the men, were assisted by faculty members in finding a job. Moreover, 64 percent of the jobs held by men but only 49 percent of these held by women were relevant to their field of study.

Differences in costs and available aid. Lower tuition costs for in-state students at public colleges and universities is a frequent form of financial aid. In some states, however, the law specified that the wife is considered to be a resident of her husband's state, and that a woman student who is a resident of the state will lose her right to lower tuition status if she marries an out-of-state male student at that institution (Kanowitz 1969).

Another legal complication for women students in some states are laws which make it impossible for married women to borrow money in their own name without their husband's permission.

Institutional Regulations

Once the woman student has been admitted to an educational institution, she will not find the number of barriers diminished. All too many colleges, universities, graduate schools, and continuing education programs bristle with rules and regulations that increase the difficulties facing the woman student but that have little rationale in terms of improving her learning. Among these arbitrary policy decisions are: (1) refusal to grant credit-by-examination or credit for nontraditional learning, (2) adoption of restrictive regulations pertaining to residency, attendance, size of course load, time limits for completing a program, and regulations mandating certain courses, and (3) irrational housing regulations.

Credit for nonclassroom learning. The Second Start Study (Paul 1971) is at the present time investigating the degree to which failure to permit life-experience credit or credit for such examinations as those in the College Level Examination Program (CLEP) serves as a barrier, especially to the education of low-income women. Paul expressed concern that the areas covered by the CLEP program are not those with which low-income women have much familiarity and suggested that the inclusion of examinations in consumer economics, family life, infant and child care, etc. would be better measures of what women have learned away from formal education. She also commented that, although the CLEP program will soon offer an examination in Black History, there has been no indication of plans for examinations in women's studies.

Special problems have been frequently encountered by mature women undergraduates. Myers (1964) said,

> We have found that some departments will recognize our experience in certain fields and waive requirements designed to give the inexperienced undergraduate practical experience in group work. However, others of us have

> found that even 20 years' experience is completely disregarded, and requirements remain inflexible.... We submit that this is a waste of time and experience and request that the adjustment of requirements on the basis of related experience be universally considered.

A study of married women's resumption of education in preparation for teaching also led Ruslink (1969) to recommend proficiency examinations in lieu of certain course requirements.

The failure of colleges and universities to provide credit for learning which takes place outside of the classroom has also been pointed out by Cless (1969).

> Colleges and universities pay much lip service to the learning of living but most of them still jealously refuse to consider credit for nonclassroom learning. This means that a woman leaving the lecture hall to be married at twenty and returning at thirty-two, when her last child enters the first grade, presumably has learned nothing in the intervening twelve years that could be measured and recorded as progress toward a diploma. With increased life expectancy and sustained vigor there is no valid reason why one cannot profitably begin either undergraduate or graduate study at the age of thirty-five. Colleges and universities must begin to look for ways to utilize nonclassroom learning within the degree system if older women are to ease existing and predicted shortages of professional manpower. It is possible to give academic credit for experience gained outside the classroom--as colleges honoring VISTA, the Peace Corps, and ghetto tutoring are finding, as Antioch, Bennington and Berea have demonstrated for years. Able women may deserve advanced educational placement when they return to formal education after work in the League of Women Voters, a cooperative nursery school or a secretarial job. Colleges and universities concerned with the education of women will have to admit that raising a family and serving a community are learning experiences as valid in fact, if not in kind, as sitting in a history classroom or standing in a biology laboratory.

Requirements. The regulations which require students to maintain a full-time course load or to complete the course of study within a specified period of time often act as barriers to women. When some of these regulations interact, the woman student may be placed in an impossible dilemma. The Modern Language Association (1971) found that only 42 of the 254 departments they surveyed had no time limits on the completion of study.

Other schools insist on continuous enrollment and may not even allow students to have a leave-of-absence for family emergencies or maternity leave. Strict attendance requirements may present a particular barrier for the mature woman student from a low-income family since funds are lacking to hire a mother-substitute to assist in emergencies (Paul 1971).

Cless (1969) has provided an excellent discussion of the rigidities of the higher education timetable that while stressing life patterns that are appropriate for men often prohibit education for women.

> The compulsive uninterrupted full-time study sequence of high school, bachelor's degree, then the master's degree followed by the Ph.D., M.D. or LL.D., can be broken, or pursued more slowly, with no diminution of quality. Part-time study must be recognized as natural, desirable and just as effective as full-time study. Higher education, at all levels, must cease its current punishment of failure to follow an academic pattern consecutive in time and specialized in content, if able women are to contribute fully to the future. Far from damaging the excellence of education, an acceptance that the intellectually productive periods of a woman's life may be different in time from those of a man will produce a response from the feminine student to her preceptors that is impossible when that student is forced into an ill-fitting masculine mold. We can accept the different life patterns of men and women while rewarding them equally for planned, purposeful progression.

As was discussed in the section on admissions, many schools will not accept students for part-time study. Other schools, which will accept part-time students, require that a certain period of time be spent "in residence" or with a full-time course load. Lyon (1964) pointed out that "many top universities will not allow a candidate to earn a doctorate entirely on a part-time basis."

According to Ruslink (1969), the greatest deterrents to a woman's returning to school are conflicts of family and college obligations. One of the two greatest obstacles to the subjects in her study was regulations about the size of the required academic load. This is a factor beyond the control of the subjects but not beyond the control of educational planners.

Specific course requirements that seem to be unnecessary or even embarrassing for the mature student are another problem. Some aspects of this have been discussed in the earlier section on lack of credit-by-examination or credit for life experience.

Myers (1964) found that the requirement of physical education for mature women students created a particular nuisance. She observed that "most married women, particularly those who have small children or who do their own housework, get plenty of exercise!" Kampen (1969), in an amusing account of a woman's return to college after 25 years, described the difficulties of a mature woman participating in a physical education program designed for much younger students.

Ruslink (1969) recommended that "certain requirements which are embarrassing or unreasonable for the mature student should be eliminated or adjusted. These include such activities as physical education classes and home management house residence." In the home economics school described by Ruslink, students are required to spend a semester living in a house where they are responsible for preparing meals, cleaning, child care, and other domestic activities. The necessity of removing a married woman from her home and family for such an experience seems, at the least, obscure. Residential requirements in schools of nursing also act as barriers to the enrollment of women with family responsibilities.

Housing. Still another type of regulation which often results in difficulties for women attending college are the rules relating to housing. Cross (1971b) has pointed out that housing regulations frequently limit women's enrollment. For example, to require women students to live on campus and to eat in university dining halls, rather than in off-campus apartments where they may do their own cooking, often raises the cost of education. There has been in

recent years, a trend away from these housing practices, especially for juniors and seniors. While it would be rare to find such regulations applied to mature women, Kampen (1969) described an extreme situation in which a woman student who returned to college after 25 years was required to obtain her mother's permission to live off campus.

The major problem with many of these arbitrary rules and regulations is not so much their existence as it is the inflexible manner in which they are administered. Such rigidities may be indicative of an underlying although perhaps unconscious negative attitude toward the education of women. The Modern Language Association Commission on Women (1971) has recommended a reform of policy to "establish flexible arrangements that permit women to continue graduate school and to work as faculty without penalty for marrying or for bearing and raising children."

Curriculum Planning and Student Personnel Services

The fourth area of institutional barriers lies in the nature of curriculum offerings and student services. There are a number of program variables that especially affect women students. These include: (1) time and location of courses, (2) child care facilities, (3) counseling and orientation, (4) external degree programs, (5) means for accelerating courses or program, (6) access to academic resources, (7) differentiation between full- and part-time students, (8) part-time clinical or field work, and (9) birth control and abortion information.

Course time and location. A major deterrent to the participation of women in post-secondary education is the lack of conveniently scheduled courses. Another aspect of this problem is the location of the course being offered. Many colleges and universities are located in urban areas. Often

access is difficult and extraordinarily time consuming for the suburban housewife. Many women are also concerned with the dangers of traveling alone in a city especially after dark. On the other hand, courses in suburban locations may be impossible to reach by public transportation.

Komarovsky (1966), in discussing the problems of mature women returning to school, talked about the distance between student and college and its relation to suburban expansion. Ruslink (1969) recommended that colleges and universities arrange more off-campus courses in local communities. Mature women junior college students felt the need for more courses or class sections to be held in branch schools rather than on a main campus (Shoulders 1968).

Another problem that relates to convenient course scheduling for women students is the time of day when a course is offered. Again, no one time of day or place is convenient for all women. Mothers of young infants and working women may be able to attend only during evening hours when husbands are available to baby-sit; mothers of older children often prefer courses scheduled while their children are in school.

The Berkeley study (1970) stated that "women who are caring for children or who need to work to support their families want flexible programs with courses offered at convenient hours."

Goodwin (1966) found that the scheduling of classes was a major difficulty for the woman doctoral student.

Hembrough (1966) in her study of student wives and married women students found that evening hours were the most frequently mentioned by the mature women as being best suited for class attendance. Over half of the women in her sample who were not attending college said that they would be able to attend only if late afternoon, evening, or Saturday classes were available. Some of the women who were attending classes said that they could continue

only if evening classes became available in their fields. Hembrough raised the question, "How many married women choose goals based on what late afternoon and evening classes are available rather than pursuing goals related to their own interests and abilities?" The author pointed out that the time of day when a married woman can attend classes is determined by the schedules of others--her husband, her children, her employer, the baby sitter, the school, and even the transportation system.

Unlike Hembrough, Myers (1964) found that, for many women, attending evening classes is impossible or very difficult. "Our husbands and children want us to be home at night, when they are home. It is in the day, when they are at work or at school, that we are free to attend class."

Scheduling difficulties were mentioned by 26% of Shoulders' (1968) sample of mature women who were junior college students. Among the problems mentioned were more limited course offerings in the evening, the need for more sections and courses in the evening, and the availability of course registration during the evening.

These studies emphasize the fact that different women need different kinds of course schedules and locations. Many institutions schedule classes for part-time students only in the evening. There is a particular need to offer more scheduling choices to part-time students. The new external degree programs may do much to open up more educational opportunities for women.

Child care. A second and very much needed change in many college and university programs is the provision of child care facilities. Of the schools surveyed by the American Association of University Women (Oltman 1971), only 5 percent had some kind of day care services for students with small children.

The Newman (1971) report recommends, "Facilities should be provided which give recognition to the fact that a woman is not a female bachelor.

The establishment of child-care centers is perhaps the most important practical step to be taken, but other facilities such as access to housing arrangements and health services are needed."

The single greatest problem for women in the Berkeley study (1970) was the lack of "high quality child care facilities for members of the university community." Not only was the number of public child care facilities found to be inadequate but also the income ceiling in these public facilities makes them unavailable to many students while they were still not able to afford private child care. About 25 percent of the women graduate students at Berkeley had children so the need was not limited to a few individuals.

Graham (1970), in a discussion about the problems of the academic woman, commented upon child care centers and their benefit to both university employees and students.

> For mothers to have a place where they can leave their children, confident that they will be well cared for, would be a tremendous help. Ideally these centers should be open to all employees and students of the university, with preference in admission given to children of women attached to the University. Thus women graduate students would have a real chance to finish the work for their degrees despite their maternal responsibilities.

In a study of student wives and mature women students by Hembrough (1966), women without children at the University of Illinois were more likely to attend school than women with children. However, the fact of being a mother did not appear to be the determining factor in whether or not married women continued their education. A response to one of the questionnaires read "I would think the biggest help would be to have a place where we could take the children and leave them while attending class or studying at the library."

The women attending junior colleges, who were surveyed by Shoulders (1968), also mentioned the need for child care facilities on campus, and Ruslink (1969), after studying married women resuming education to prepare for teaching, recommended that nursery service be provided by colleges.

The need for child care facilities may be felt by male students as well as women students. In the University of Chicago report (1970), 33 percent of the men with children and 77 percent of the women with children implied that their academic work was interfered with by the need to care for their children.

Komarovsky (1966) and Mueller (1966) have also written that one of the problems of educated women during their child-raising years is the need for substitute mothers and/or child care facilities. An excellent discussion of the advantages of university child care facilities has been prepared by Cohen (1971).

Counseling and orientation. Women students, especially mature women returning to education after a hiatus of several years, are thought by some to need special counseling and orientation programs. Lack of such programs may make their return to college considerably more difficult.

The type of specialized counseling which may be helpful for college women was outlined by Blackwell (1963). He pointed out that "the counseling which they receive in college directly affects the education of women after they leave the campus." He stressed counseling to help women understand the life patterns available to them. He also discussed special orientation courses for women. "Some educators maintain that a special kind of orientation course for women is needed in college, perhaps one focusing upon the life patterns of women in American society. Such a course with academically respectable content can be developed as more and more research is becoming available on these matters."

The lack of counseling services emerged as a problem for the junior college students in Shoulders' (1968) study. She noted that these mature women students would benefit from an orientation program for part-time students. Part-time students, too, should be provided with information on counseling.

Myers (1964) similarly recommended that special advisors be available to counsel mature women students. She stated that because the problems such students face are unlike those of younger undergraduates, a counselor is necessary who would be acquainted with how institutional policies can be adapted for mature women.

After studying a group of mature women students, Ruslink (1969) suggested that a special administrative unit might be organized in colleges to deal with the problems of the returning student. Such a unit would provide not only counseling but also any other services necessary to help these students enroll and to continue their education. She also suggested that the administrative officer of such a unit sit as a spokesman for the interests of these students in regard to college policies and practices. She recommended that "personal, vocation, and academic counseling services should be provided and publicized for mature students" and that colleges provide special orientation sessions for mature returning students.

However, inadequate counseling for women is not limited to mature students returning to college. Cohen (1971) stated that "even at elite women's colleges, counselors discourage women from applying to law, engineering, or medical schools." She recommended that "counselors and academic advisors should consciously seek to encourage able women, on the same basis as men, to pursue graduate education in fields for which they show an aptitude, helping to counteract the prevailing attitude of society towards 'male' and 'female' occupations."

External degree programs. An even greater barrier to the matriculation of many women is the lack of external degree programs at most schools and colleges. The woman who is unable to attend college classes because of distance of the institution, of responsibilities of family and/or job, or of physical disability, could benefit from correspondence or TV courses for credit. Courses of this sort allow the woman student to provide for herself the flexible arrangements that regularly scheduled classes do not offer. Recently a number of states have instituted or are planning to develop external degree programs.

Hembrough (1966) found that women at the University of Illinois wanted a wider variety of televised and correspondence courses. Ruslink (1969) suggested nonresident education in home or community "learning centers." She also suggested that more educational opportunities be provided for women unable to attend formal classes "through television, radio, programmed instruction, correspondence courses, telephone conferences and independent study arrangements."

Segregation of part-time students. A question in designing programs for part-time students is whether there should be institutional differentiation between full- and part-time students. Some authors, for example, suggested that the part-time students should be placed in classes designed specifically for them. The argument for "segregation" has been particularly used in discussion of programs for mature women students--the argument being that these students have needs different from those of their younger counterparts. Some authors, however, felt that separation of mature students from the usual program of the institution might result in their receiving a poorer quality of instruction, more restricted selection of courses, and lesser opportunity to be integrated into the total academic community. The junior college students in Shoulders' (1968) study, for example, felt that the limitation of course

offerings in evening classes for part-time students was a distinct difficulty. Programs that separate part-time students or mature women from the rest of the student body can result in difficulties in their interaction with other students. Goodwin (1966) points out that this can be a particular problem for the woman doctoral student.

Acceleration of courses or programs. Another problem in designing programs for students is providing means of accelerating course pace. Lacking the means for doing this may mean that a student must be on campus for many short periods of time rather than for fewer, but longer, periods. When combined with such problems as transportation and child care, this lack of flexibility may prevent students from participating in courses. A student responding to Hembrough's (1966) questionnaire suggested, "Why not classes which meet once a week for three hours? This would eliminate so much time being spent going back and forth to campus and alleviate the parking and transportation problem." Myers (1964) discussed the difficulties with course attendance requirements at Temple University that obliged its full-time students to attend classes five days a week. She recommended, for students who could demonstrate that home responsibilities would make five days' attendance a hardship, that they be allowed to schedule a full-time program with only two or three days of course attendance. The additional costs in child care and transportation resulting from the more frequent attendance requirement can be considerable. Many colleges are now offering evening division courses once a week for three hours.

Other techniques that could be used to provide acceleration are independent study, educational television or computer assisted instruction, and tests or courses that might provide blocks of credit in "general education" areas.

Limited access to academic resources. Limited access to many academic resources is a problem that confronts part-time students. Libraries, counseling

offices, data processing centers, laboratories, registration offices, and other facilities may be open at times convenient for the typical, full-time day student. But it is not unusual for a student, enrolled in evening classes, to have to take a day off from work, with the resulting loss of income, in order to register for evening courses or to consult with an advisor. Women who already have extensive home and/or work responsibilities may find this too great an obstacle. Respondents to Hembrough's (1966) questionnaire mentioned problems related to use of library facilities. One said, "Library services are most inconvenient. All required reading is in reserved books. So I hire a baby sitter, waste 20 minutes finding a place to park, and then find the specific thing I need is not available. I cannot use my time profitably in the library waiting (full-time students always have other assignments to work on). This then wastes a good deal of my time and money."

Birth-control information. A counseling problem which particularly affects women students is the need for birth control and abortion information. The lack of such an information service may result in women being forced to leave school, especially if the lack of such information is combined with institutional rules disallowing maternity leave.

"The typical campus clinic ignores the specific health needs of women and, to a large degree, reflects a somewhat Victorian attitude toward the female. In view of the recent radical changes in social mores and campus regulations, college and university medical services should be expanded and updated (Cohen 1971)."

Faculty and Staff Attitudes

The attitude of the faculty and staff is still another institutional barrier to the woman who is enrolled in any type of postsecondary education.

Opinions which these persons hold about the "appropriateness" of women's education often mean the difference between successful completion or lack of completion of the program. Negative attitudes about women affect the student in several ways: (1) she is less likely to receive assistantships, (2) she is discouraged from graduate study by anti-nepotism rules, (3) she gets less help in job placement, (4) she lacks encouragement and guidance, (5) she lacks female role models in the faculty and administration, (6) she receives counseling that reflects sex-stereotypes and masculine expectations about women's life style, and (7) she is subjected to doubts about her motivation as a student.

Assistantships and jobs. The difficulty of the woman graduate student in obtaining financial aid has already been discussed. The problem of receiving teaching assistantships is even greater than for other types of financial aid. Data from Harvard (1970) indicated that women constituted 24.6 percent of students admitted to the Graduate School of Arts and Science in 1968-69 but made up only 19.2 percent of those awarded teaching fellowships. The reasons usually offered for this type of discrimination are two: (1) women are not considered "appropriate" for teaching predominantly male undergraduate classes and (2) male faculty are reluctant to accept female students in the role of protégé. These objections might be better met if more women were admitted at both the undergraduate and graduate levels so that the number of women with training for faculty positions could increase. However, this is a problem of hiring practices to an even greater degree than it is an educational problem.

The Berkeley study (1970) found that women were often told by department heads that they would be unable to get jobs in major universities. Such

advice becomes a self-fulfilling prophecy when those department chairmen who tell women students this also refuse to hire women as members of the faculty of their department. A discussion of discrimination in employment of women is outside the scope of this review. Interested readers are referred to sources such as Epstein (1970) and Bird (1968).

Antinepotism rules. Antinepotism rules on many campuses are a subtle barrier that prevents women from enrolling in graduate study. For women married to men on college or university faculties, the local institution may be the only possible source of employment within commuting distance of home. Knowing that they will be unemployable once their graduate study is complete, many women refuse to place themselves in a "dead-end" situation. The Modern Language Association (1971) found that only 23% of the 254 universities they surveyed have no antinepotism rules. Graham (1970) and Simon, Clark, and Tifft (1966) have discussed the antinepotism rule as an obstacle to the employment of women Ph.D.s and a discouragement to women who might otherwise seek the doctorate.

Lack of encouragement and guidance. In her review of the literature on mature women in doctoral programs, Randolph (1965) spells out many of the consequences of faculty and administration attitudes. She stated that discriminatory practices exist both in assessing motivation and in withholding encouragement and guidance. She continues:

> Responsibility for the discriminatory practices is two-fold: (a) administrations and faculties of graduate schools persist in viewing women in archaic terms, and (b) only a very small minority of women capable of completing the course of study leading to the doctorate surmount the existing practices to pave the way for those who follow.

Faculty attitudes created difficulties for nine percent of the mature women junior college students studied by Shoulders (1968).

The Harvard Report (1970) described the effect on women students of an academic atmosphere where they are treated with distrust and suspicion. "Women students experience what has been called a 'climate of unexpectation': fear of discrimination, awareness of their real difficulties in working out career patterns, and the assumption on the part of some faculty members that 'women don't pan out.'"

The study of college-educated women conducted by the AAUW has resulted in numerous anecdotes of sex discrimination (Kresge 1970). A woman told of attempts made by the architecture department to switch women students into interior decorating. A male professor told how his wife, although awarded a prize as the best graduate student in her department, was told by the department chairman that he refused to recommend her for a fellowship because of her sex. A woman applicant to law school told how "the dean tried very hard to discourage me from enrolling. I was 30 years old and had been working over five years for lawyers. I knew precisely what I wanted and had the prerequisites to do it."

Other articles about women doctorate earners also describe the attitude of some male faculty members toward women students.

> For women, the predominant male attitude translates into severe psychological harassment and intimidation. The anti-feminist bias is obvious in remarks made by professors and colleagues. "We are in a hostile environment." "Women taking their orals are harassed and humiliated." "In a graduate history seminar, there were five men and three women. The professor constantly belittled the women. The next year, only one woman remained--the other two had dropped out." Another professor was quoted as saying, "It's a waste to educate women to the Ph.D. level. A master's is all one needs to be a good wife and mother (Bikman 1970)."

* * *

> My first day in graduate school I was greeted with the comment of an economics professor: "Women have no place in economics." He refused to mark the papers of the women students. We protested to the department but they upheld the prerogative of the faculty. The man in question was a visiting professor and they didn't want to "impose on him"! Never mind the effect on the women students! (Rossi 1969)

A study of graduate students at Berkeley (1970) found many complaints about faculty counseling and advice. The women students cited "discouragement of their work, implications that scholarship is unfeminine, indifference to their training, and reluctance to find them aid or jobs."

Bunting et al. (1970) expressed hopes that the move toward co-residential housing will bring closer associations between students and faculty and will lead to greater faculty recognition of the intellectual interests and aspirations of women students.

Career-oriented women may face problems when they encounter the male viewpoint (Lewis 1969). He stated that the dominant role of men in our society including administering of educational institutions, deciding who shall teach in them and who shall be admitted. He concluded "The major educational thrust by persons concerned with the expansion of opportunities for women should be aimed at men rather than at the women themselves."

Lack of role models. The absence of women from the faculty, administration, and governing boards of these educational institutions is a major source of difficulty. Discrimination against admitting women to college and graduate school ultimately results in few women faculty. However, since in many departments the proportion of women faculty is considerably lower than the proportion of women receiving the doctorate, a hiring problem is also

evident. The lack of women faculty and administrators creates a lack of role models for young women considering academic careers.

"Career women are products of broader sex role definitions" (Almquist & Angrist 1970). They have also been more influenced by teachers. Women having limited contact with career role models tend to stress the importance of family and motherhood rather than careers. While male professionals can give women career encouragement, it is necessary for female students to perceive careers as open to women as well as to men.

In a discussion sponsored by the AAUW (1970) on "How Women Can Combat Particular Discriminations," Martha Griffiths, a member of the House of Representatives from the State of Michigan, described a letter which she had received from a young woman graduate student in microbiology.

> She looks with horror upon the fact that there is not a single woman with a Ph.D. in microbiology who is in a university as a full professor or who has really had a good opportunity. She pointed out that what we need is heroines. We need to show high school girls that they can go to the universities on the same basis as men, that they have a chance for an intellectual life within the university or working life in private industry. She needs to know that all of these things are possible.

The Princeton University report (NOW 1971) also discussed the need for women faculty as role models. "Those female students fortunate enough to have been admitted must face a near total lack of adequate role models--of talented and successful professional women. They must also somehow rise above the strongly negative opinions of women held by some of the men who are in a position to influence their lives."

Also, very few institutions have women presidents who might serve as role models. Even many of the women's colleges are headed by a male. Cross (1971) has also described the effect of male dominance in higher education.

> Society has tended to look upon universities as male institutions, and females have been slower to apply. The predominance of men on facilities not only perpetuates this view but deprives young adults--both male and female--of the opportunity to interact with talented female scholars. Universities need to make it widely known that women are welcomed into academe on an equal basis with men.

Lack of adequate female representation on governing boards was documented by Hartnett (1969). The deficiency contributes to these governing bodies having little concern for the treatment of women students, faculty, and staff within the institution. It is likely that only a moderate show of interest by women trustees regarding the rights of college women could result in dramatic changes in the treatment of women in higher education. However, there are many schools and colleges that have no women on their board and thus lack an advocate for the women attending these institutions.

In the American Association of University Women survey, Oltman (1971) found 21 percent of institutions of higher education had no women trustees. The number was even larger for schools with enrollments of more than 10,000 (32 percent), public schools (26 percent), and coeducational schools (24 percent). Additionally, 25 percent of the sample had only a token woman on the governing board. Women trustees were not found to be elected or appointed in proportion to the number of women undergraduates or women alumnae.

Sex stereotypes. Many counselors hold sex-role bias. Pietrofesa and Schlossberg (1969) found that a majority of a sample of both women and men counselors made statements indicating bias against women entering a masculine occupation, engineering. Blackwell (1963) also described the effect of unfavorable faculty attitudes toward adult women students. Eyde (1970) suggested that specialists in continuing education be prepared with data to refute statements made by educators who think that women are not serious about their work, or that women professionals are not productive.

> Subtle bias in counseling might be preventing some women from taking up careers in nontraditional fields such as engineering. Also, misconceptions exist regarding women's commitment to their jobs. Vocational counseling needs to include consideration of women's life styles. Such counseling, hopefully occurring during critical developmental stages ought to deal with key questions such as the number of children women would like to have. Finally counselors need to be aware of subtle changes occurring in occupations so as to be preparing women for the future instead of for the past.

Effective counseling in college helps women to examine their life patterns and rules and to overcome the social stereotypes.

Counseling that limits women's career goals may, in part, be responsible for lowering the number of women applicants to selective universities (Cross 1971). Women with high ability and high socioeconomic status are more likely to enter state colleges or teachers colleges than men of the same background and ability who tend to enter the universities. This may also be partially attributable to women's lower levels of aspiration and confidence, a point that will be discussed later. Cross recommended that "pre-college and college counseling encourage women to follow their own interests rather than those dictated by cultural stereotypes."

The Princeton Report (NOW 1971) described an incident of masculine attitudes in counseling that may be all too typical. The Director of Mental Health at the institution stated in 1969 that women "still haven't come up to men intellectually." One cannot help but be concerned about the counseling women students will receive from persons holding such attitudes.

Not only does counseling of women students often encourage sex stereotypes, it also often perpetuates male expectations about women's life styles. Men and women students need to talk to faculty members and counselors who are aware that there are many different life styles possible for women today. Bunting et al. (1970) pointed out that:

> Equal educational opportunities for men and women will not exist at any university until expectations concerning appropriate life styles change. As long as little boys are encouraged to aspire to careers and little girls to jobs and marriage, academically talented girls will remain disadvantaged in college, whether they make up 20 percent or 70 percent of the student body. Their cultural handicap will not be eliminated until it is understood that there are many different life styles for both men and women and that a particular style does not determine one's masculinity or femininity. In the long run, the erosion of sex stereotypes will do more to equalize educational opportunities than any changes made within the universities themselves. Once we decide that women as well as men should be physicians, for example, we will find ways to make medical education and practice compatible with family responsibilities.

Many institutional problems can be considered to be the result of a lack of flexibility. This lack of flexibility is largely found in colleges that were designed to provide education for the bachelor male attending school full time. Cross (1968) has called for new flexibilities and innovations in education, not only in course load, scheduling, and financial aid but also in independent study.

Cless (1969) deplored rigidities that all but prohibit post-secondary education for women and attempted to characterize their source and their consequences:

> The masculine attitudes that govern the procedures and structures of American higher education are not consciously vicious, merely unexamined, discriminatory by inheritance. Even thoughtful men, educational liberals, assume that the pattern that worked for them is, therefore, the best pattern for all humans; that if women are not able to realize their full intellectual potential within existing academic procedures, the fault lies with women not with the society.

Riesman (1965) charged that American academic life has an increasingly "male" mode of performance. A well documented study of young women attempting to fit into the "male" mode of performance at Yale has been written by Lever and Schwartz (1971).

The effect of institutional situations upon women scholars will vary considerably. One young women may have the intellectual and emotional resources to meet and overcome many barriers; another may not be so fortunate.

In the next two sections a number of the barriers that exist within the woman herself or that affect her personal situation will be discussed.

SITUATIONAL BARRIERS

There are in the lives of individuals many "here-and-now" circumstances that affect their activities. In the case of women wishing to continue their education, these circumstances may serve as situational barriers. The following situational influences that constitute barriers will be discussed here: (1) sociological, (2) familial, (3) financial, (4) residential, and (5) personal.

Sociological Factors

The major sociological barriers are related to social class or ethnic group membership.

Class. In general, women from upper socioeconomic levels are more likely than women from lower socioeconomic levels to continue their education (Husbands, 1972). Hilton and Berglund (1971) have found that high ability boys of low socioeconomic status were more likely than girls of similar status and ability to enter college. Cross (1971) has pointed out that "the greatest differences in college attendance rates of men and women occur among students who are above average in ability but below average in socioeconomic status." She found that:

> The highest male concentrations exist in community colleges and in selective universities. The reasons for this are quite different, but both are linked to the cultural double standard. Community colleges draw their students primarily from the lower socioeconomic levels from which males are more likely than females to attend

> college. The largest reservoir of academically well-qualified young people who are not now attending college are women from the lower socioeconomic levels.

"Women in a lower social class attached more importance to the economic hardships of attending college," according to a study by Ruslink (1969).

The interaction between social class and financial obstacles to post-secondary education has been documented by Johnstone and Rivera (1965). For women under age 45, 74 percent of those of low SES, 53 percent of those of middle SES, and 19 percent of those of high SES reported they "could not afford" to participate in further education. The data for older women and for both older and younger men showed no marked differences from the data for younger women.

Ethnic group. Ethnic group membership was found to be related to college aspirations and attendance. Black women attended college more frequently than black men. The chief differences in educational aspirations of black and white boys and girls in inner-city-low-income, and outer-city-middle-income Detroit were found by English (1970) to be not along lines of race but of sex. The highest educational aspirations were held by black women, the lowest by white women. The highest dropout rate for the inner-city schools was among white women.

Recent statistics (Statistical Abstracts, 1970) on sex differences in college attendance among blacks suggest some reversal of the long-time trend for black women to be more apt to attend college than black men. This may be due, in part, to the efforts of many colleges during the 1960's to recruit black male students. In 1960, 2.8 percent of black males aged 25 or older had completed four or more years of college compared to 4.1 percent of black females. By 1970, the figures showed that 4.8 percent of black males and 4.5 percent of black females aged 25 or older had completed four or more

years of college. (Comparable 1970 figures for whites are 14.3 percent of males and 8.5 percent of females.) An even more recent source (Survey Research Services, 1972), indicates that 40.8 percent of the male black students graduating from high school in 1971 and 59.2 percent of the female black high school students in that class intended to go to college.

In ethnic groups other than black, the reverse may be true. For example, Cross (1971) has found that Mexican-American girls tend to have lower educational aspirations than do the boys of similar ethnic background.

Familial Factors

Family circumstances are, of course, closely linked to the sociological factors. The attitudes of parents or husband about women's education often have their origin in social-class customs. Family conditions that can influence a woman's participation in post-secondary education include: (1) attitudes of parents or husband, (2) head-of-household responsibilities, (3) family size and child-care responsibilities, (4) care of ill or elderly family members, (5) lack of household assistance, (6) lack of privacy for study, and (7) mobility due to the husband's career.

Ruslink (1969) found that the greatest deterrents to women's return to college were the needs of their families, especially when these needs conflicted with college demands. Astin (1969) found domestic obstacles were problems for the career development of the woman doctorate. The changes in the family cycle in the past 80 years and the implications of these changes for the education of women have been discussed by Neugarten (1972).

Attitudes of parents or husband. The attitudes of a woman's parents and/or husband toward her further education were found to be extremely important. Cross (1971) stated that parents seem to feel that it is more important for a

son to go to college than for a daughter. Census interviewers (Froomkin 1970) found, however, that the higher the educational level of the parents, the less differentiation between the educational needs of sons and daughters. Cross (1968), in her discussion of the relationship of parental encouragement to college attendance, reported that boys were more likely to get this encouragement than girls. "Almost 70 percent of the high school senior men who enter college report 'definite encouragement from parents' compared with 60 percent for the women."

Mitchell (1969), in a study of 224 women who received the doctorate from the University of Oklahoma, found that nearly three-fourths of her subjects reported their mothers as a source of motivation and help in setting their educational and/or occupational goals.

Marriage itself may introduce many problems for the woman who wishes to continue her education. Goodwin (1966) found that single women who were doctoral recipients had fewer difficulties than did married women. Marriage was given by 42.5 percent of the women studied by Lord (1968) as the reason for not continuing their education beyond the bachelor's degree. Feldman and Newcomb (1969) stated that married women are more likely than men to feel that emotional pressure from their spouse would cause them to drop out of graduate school.

Lewis (1969) pointed out the need for a "cooperative and supportive husband" if a college woman is to resolve the conflict between marriage and career.

Mitchell (1969) reported that only 7.3 percent of the women doctorates in her study were actively encouraged in their educational plans by their husbands; the remaining husbands were neutral or nonsupportive. Astin (1969) found that 12

percent of the women holding doctorates in her study experienced negative attitudes from their husbands about their careers.

Doty (1966) did not find that the attitude of husbands toward their wives' return to college differentiated between mature women who were and were not students. In each case, nearly all of the women (95 percent) said their husbands would approve. She found that significantly more of the husbands of students than of nonstudents had attended college and were employed in the professions. "While nearly all women in both groups said their husbands would or did approve of their return to college, it is possible that the environment provided by a college-educated husband stimulates a woman's educational aspirations."

Head-of-household responsibilities. One of the most difficult family situations is faced by those women students who, for one reason or another, must assume head-of-household responsibilities. Recent figures (Bureau of Labor Statistics 1970) indicate that 11 percent of all U. S. families are headed by women. Most of these women could not rely on financial support from husband or parents while they attend school; they had to support themselves and those dependent upon them while trying to obtain additional education. The problems of these women are indeed severe. Often trapped in low-paying jobs owing to factors such as lack of education or sex discrimination, they could not afford the additional schooling they needed to lift them out of their predicament. Hunter (1967) has reported that graduate students with dependents receive fewer stipends than students without dependents.

Family size and child care. Even with a supportive family, the woman who wishes to continue her education faces many other problems. These include the care of small children. Several studies have shown that family responsibilities

interfere with women's education (Myers 1964; Goodwin 1966; Hembrough 1966; Shoulders 1968; Mitchell 1969; Mitchell & Alciatore 1970).

Having young children appears to make a difference in whether or not married women continue their education. Rates of participation in adult education were lower for mothers than nonmothers, according to Johnstone and Rivera (1965). Interestingly, fathers were more likely to participate in adult education than nonfathers.

Hembrough (1966) found that having children made a significant difference in whether or not married women attended college. She found that 52 percent of the married women who attended college had no children, but only 38 percent of a comparable group of women who were not attending college were childless. "However, in and of itself, being a mother apparently was not the determining factor in whether a married woman continued her formal education." The presence of young children in the home is, nevertheless, a major barrier to continuing education for many women.

Goodwin (1966) found that women with children had many more problems associated with attending college than those without children; moreover, many of these problems were not directly related to child care. She reported that number of children did not present as much of a problem as age of children. Many women in this study had postponed their return to school until their children were older. While pursuing the doctorate, married women with children had difficulties with family relationships, the cost of study, mobility, and family illness. She concluded that "Ultimate success in attaining the degree appeared to be dependent upon a facilitating agent in the educational or home environment, in addition to the persistence and intelligence of the recipient."

Mitchell (1969) found that 34 percent of the women doctorates in her study felt that responsibilities to husband, children, or elderly parents had been impeding factors in their education and had delayed receipt of the degree. Women without family responsibilities were found to be more likely to complete the degree in the usual length of time. Stokes (1970) reported that 41 percent of the women graduate students in her study found family responsibilities a problem in pursuing their studies.

Care of ill or elderly. Women who are unmarried or are heads of households may be particularly burdened by their responsibilities to elderly family members. All too often, by the time young children no longer need care and attention, an elderly parent may begin to require similar care. The woman who finds herself responsible for a husband, parent, or child who is chronically ill or seriously handicapped may never be able to be free to study except by correspondence or TV courses.

Lack of household assistance. For many women, the availability of household assistance, whether from paid help, husband, parent, or other relatives, may be a significant factor in permitting a continuation of education. Women were 22 percent more likely than men to report "hard to get out of the house at night" as a reason for not pursuing further education (Johnstone & Rivera 1965).

Privacy. A problem for many women was found to be the availability of privacy for study (Goodwin 1966; Shoulders 1969). This problem occurred most frequently in families that lived in crowded conditions and/or in families where there were preschool-aged children.

Mobility. A very different type of family situation, frequent moving because of the husband's career, is a problem often mentioned by women who wish

to continue their education. Astin (1969) reported that about 25 percent of the women with doctorates in her study found that the moves necessitated by the husband's job were a hindrance to their own career development.

Much of the difficulty caused by family mobility is the result of institutional regulations regarding residency requirements and transfer of credits that have been discussed in the previous section. More flexibility in these requirements might remove a great many of the difficulties currently associated with family mobility.

Cless (1969) described the problem that many women face:

> The residence requirement for a degree is an anachronism that militates against the able woman in a mobile society. A young woman may have fulfilled her requirement at college A before she married. Following her new husband to another part of the country, she transfers to college B and begins to rack up the necessary credits in residence again, since B has its own requirement and will not accept time served at A. Her husband is moved again. When college C insists that residence at colleges A and B is useless for its degree, and her original admitting college refuses its degree if completed in absentia, a sensible and sensitive young woman becomes a weary dropout.

Hembrough (1969) says, "Married women often encounter difficulty in trying to continue their education because of their mobility. Families move from one city to another and from one state to another. A married woman, of course, moves when her husband is ready to change universities or to change jobs." More than 60 percent of the women in her study reported uncertainty about continuing their education because of possible mobility.

Goodwin (1966) found that, for women recipients of the doctorate, mobility ranked third in the group of deterring factors (the first two were family relationships and time management) and Ruslink (1969) reported that mobility because of husband's career is a more frequent concern for women under 30 than for older women.

A problem that cannot often be remedied by institutional changes is the woman's perceptions of her opportunities to use her education. The wife whose husband is frequently relocated may simply feel that the uncertainties of her situation are so great that the time and effort required to continue her education may not be rewarded. The woman considering graduate work, especially, is loath to invest her time and energy unless there is a fairly strong likelihood that she will be able to use her advanced training. As was mentioned earlier, anti-nepotism rules are one of the more common obstacles of this type, and one where change is possible.

Ironically, the absence of family mobility can also have the same effect, as Morse and Bruch (1970) and Riesman (1965) have pointed out. The woman who sees little or no local opportunity for employment relevant to her educational interests is discouraged from furthering her studies. As Riesman has said, "Certain careers for women are limited because they can be pursued only in a few places." This is, again, particularly true of the woman considering graduate training. Even though she lives in a university town and expects to remain there permanently, she may be discouraged from continuing her education because of antinepotism rules that would prevent her employment. Other types of sex discrimination in employment may have similar effects.

Financial Obstacles

Financial problems which act as barriers to women's education include the necessity of employment for many women and their or their family's reluctance to borrow or to drain off money from other family needs.

A National Institute of Health (1968) study of women and their problems in pursuing graduate study found that 42 percent experienced financial obstacles.

A study of adult education (Johnstone & Rivera 1965) found insufficient money to be an obstacle for 43 percent of the males and females who had completed high school and 48 percent of the total sample. It was the most frequent reason cited for nonparticipation.

Fred (1962) referred to several studies indicating that financial need accounted partly for the comparatively few women in graduate education. Dolan (1963) stated that financial needs have also limited women's entry into professional education. She attributed much of this exclusion to widespread reluctance to grant women financial aid because of possible non-use of their education. She suggests that the discontinuity in women's use of their advanced training needs to be properly evaluated to remedy this.

Mitchell and Alciatore (1970) reported that 43 percent of women with doctorates in their sample had been delayed by women's inability to support an income loss during their graduate work. Women who were not impeded by income loss were significantly more likely to complete the doctorate in five years or less. The high cost of the doctorate was reported as a delaying factor by 30 percent of these women. Since 40 percent of the women in this sample financed their graduate study out of their own earnings or savings, the element of cost was especially important. In fact, 39 percent of the women in this study chose their graduate school more because of its low cost than because of its academic standing. The authors conclude that women would earn the doctorate in less time if more financial aid were available.

Ruslink (1969), in her study of married women's resumption of education in preparation for teaching, concluded that financial aid for lower-class women was particularly desirable because these women had a stronger wish to work with children yet perceived financial factors as a greater hindrance to their becoming teachers than did women in the higher social classes. Shoulders (1968)

found that the comparatively low cost of junior college attracted many younger women who aspired to the bachelor's degree.

Need to work. There are many women whose family situation necessitates their working--the poor woman, the widow, the divorcee, the wife whose husband is handicapped or unemployed are but a few of these. But for these women the very factors that make additional education desirable are often those that prevent their obtaining this education. Some of these problems have already been discussed above in the section dealing with the family responsibilities of women who are heads of households.

Hembrough (1966) discussed the problems of women who must work and also wish to attend college. The conditional nature of the needs of these women is particularly noteworthy. "A student may say that if evening classes are not available, financial assistance is necessary; but if she can continue her full-time job and take classes in the evening, then financial assistance is not necessary. Or it may be that financial assistance would be necessary if she could not find a part-time job fitting in with the hours possible for working."

The woman worker typically has little money available to her for her own needs. According to recent government data, women who worked full time in 1970 had a median income only 59.4 percent that of men. Women who have completed one to three years of college earn, on the average, less money than men with an eighth grade education ($6,604 vs. $7,535). Most women work to support themselves or to help support their family. In 1969, 52 percent of all families had two members employed. Thirty-seven million women worked in 1968; 17 percent of these were widowed, divorced, or separated from their husbands, 23 percent were single, and 30 percent were members of families where the husband's income was less than $7,000 (Monthly Labor Review, May 1970).

Attitudes towards borrowing. Another problem related to financing education for women is attitudes toward loans. Although women appear to be taking loans only slightly less often than men (Astin & Panos 1969), some parents feel that it is justifiable to borrow money for a son's education, but are reluctant to do the same for a daughter, since this would be to provide her with a "negative dowry." Data from the alumnae of selective women's colleges who borrowed as undergraduates (Cox & Van Dusen 1969) show that borrowing had no effects on marital status, childbearing, or graduate education after college.

Bardwick (1971) pointed to the fact that "the exaggerated maternal role means that when a woman does something for herself, it's labeled 'selfish'--depriving her family of something." This critical attitude is sometimes seen when a woman spends money for her own education when it might instead be spent on her children.

Residential Factors

Circumstances of location can act as barriers to women's continuing education. These include: (1) regional differences in educational opportunity, (2) distance of the home from a school or college, and (3) availability of transportation.

Regional or state differences. There have been a number of discussions about regional differences in educational opportunity. Women in rural areas are less likely to have access to education beyond the secondary school level than those living in metropolitan areas (School and Society, 1964). More free-access schools were found in the West than in the Northeast (Willingham 1970). In general, the higher the per capita income in a state, the greater is access to higher education (Mushkin 1972).

Johnstone and Rivera (1965) found more participation in adult education by those living in the suburbs or outskirts of large urban areas (but not by those living in the central city) than by those in small cities, small towns, or rural areas. The rate of participation was also higher in the Western states.

Distance. Mitchell (1969) found that, for women with doctorates in her study, proximity to the institution was the most important factor in selection of a graduate school. She discussed how the importance of proximity is related to need for continued income, family responsibility, and cost of acquiring the doctorate. Stokes (1970) found that lack of a nearby graduate school was a problem for 15 percent of the women surveyed.

Lyon (1964) also discussed the need for a graduate school within reach of women who wish further education.

> The first big question is where she can attend graduate school. Four-year colleges and university extensions are sprinkled all over our country, but to go to graduate school one must be near the state universities or in the metropolitan centers. If she lives in the hinterland, Mrs. X can forget about professional training. Curiously, not every university has realized the importance of its graduate school to the local populace. Universities think big; the nation is their scene, but ironically they may become narrow in vision. For four years I lived in a town where the only Ph.D.-granting institution within ninety miles was located. It is an important church-sponsored men's university, and lay women simply are not admitted for Ph.D. work. The rationale of the president is that he cannot be sure that women would use the advanced degrees. In my blackest moods I pondered such a lack of responsibility for the advancement of knowledge and wondered why this university and others like it deserved government support and huge grants from the major educational foundations. Why not build up the four-year college near-by (also church-supported) which did not discriminate so rigidly? Ford Foundation grants for the Master of Arts in Teaching have a sex anti-discrimination clause but interestingly, when the members of the President's Civil Rights Commission made the recommendation that universities following discriminatory admission practices be refused public monetary support, the commissioners limited their concept of discrimination to race,

> not sex. I do not mean that every men's college should become co-educational. It is only argued here that when no other local facilities are available, a major university has an obligation to open its doors to students on the basis of merit.

Doty (1966) found that while equal proportions of the mature women students and nonstudents in her sample lived within 20 miles of an institution offering a degree program, 50 percent of the students said that they would not have enrolled if a college had not been easily accessible. However, even when a school is available, it may not be offering opportunities in the particular field, emphasis, or level that the woman student desires or that are appropriate to her background and training.

Transportation. Hembrough (1966) observed that both distance from the campus and problems of transportation and parking combine to determine whether or not women can continue their education. Transportation problems may create a "psychological distance" between the institution and the prospective student much greater than the physical distance. Again, the low-income student often faces greater difficulty. If the school is located conveniently to public transportation, she may have few problems. But even then many women find the transportation schedules, which are planned for the convenience of commuters, to be a complication rather than boon. The suburbanite often finds the public transportation that could make college attendance possible for her is simply not available. Moreover, the problems of traveling alone at night on public transportation or in metropolitan areas discourages many women from attending evening classes. If a college is not located conveniently to public transportation or if it is located in an area where women are unwilling to walk alone, then the availability of private automobile transportation may determine whether or not a woman can attend classes. For suburban women this may dictate the

expense of a second car; for women living in metropolitan areas it may necessitate purchasing a car. Graham (1970) has discussed the particular educational problems of women who live in the suburbs at some distance from all institutions.

Personal Factors

Among the personal circumstances that may act as barriers to further education for women are: (1) lack of health, energy, or stamina, (2) lack of qualifications for a particular school, (3) lack of opportunities for education at a particular level or in a particular field, (4) lack of knowledge of available opportunities, (5) negative attitudes of friends, neighbors, and employers toward continuing education, and (6) community pressures toward involvement in volunteer work and social activities.

Health, energy, and stamina. When the distance of the student from the school is great, when commuting is especially time consuming, or when the pressures of the other roles the woman student must also fill become great, the need for extraordinary energy becomes obvious. It is important to appreciate the sheer physical stamina required of most women trying to combine family life and study. Johnstone and Rivera (1965) found women eight percent more likely than men to report "lack of physical energy for night classes" as an obstacle to adult education. Goodwin (1966) has pointed out that women with poor health, physical handicaps, or less than usual amounts of energy may simply be unable to meet the physical demands that formal education will add to their lives.

Lack of prerequisites. For some women, about 13 percent, according to a National Institutes of Health (1968) survey of women and their problems in

pursuing graduate study, lack of proper qualifications was a barrier to continuing education. This insufficiency may have its origins in inadequate counseling of girls at the secondary school and college levels. If young women were helped to understand that they might, in the future, wish career activities other than or in addition to those of a homemaker, they might become more concerned about obtaining the grades and courses to open up future opportunities. As was discussed in the section on institutional barriers, the removal of arbitrary and inflexible regulations could also do much to end this problem.

Lack of opportunities in a field. Even when there are schools and colleges within reach of a woman, she often finds herself unable to pursue studies locally in the area of her special interest. The complication is further compounded if the local university offers work in the field, but it will not admit women. It would be interesting to know how many women who do pursue education beyond secondary school are forced into subject areas that are their "second choice" because of the interaction of geographical location and institutional barriers.

Lack of knowledge of opportunities. For many women, the absence of counseling also means not knowing about available educational opportunities. In addition most women are not aware that the average contemporary woman is likely to work outside of her home for 25 years or more. Consequently, because of unrealistic or nonexistent counseling, they neglect to seek out educational opportunities to prepare them for their working years.

Dolan (1963) discussed the changes that might result if educational information were circulated more widely.

> Educators in the fields of higher education have learned the pattern of able women's lives, and many believe that it should be supported. But there is still much to be done by way of public enlightenment. If information about women's lives and obligations were thoroughly circulated to the public, the alumni, and the officials of institutions, it would be surprising how quickly attitudes would be affected and changes made for the better. Thus society and the college world would be led to accept sympathetically suggestions for new patterns of women's education and employment, and in turn, both would set about following them.

Mitchell (1969) drew attention to the fact that information about the changing patterns in women's working life are not reaching girls of secondary school age. Heist (1962) found that college women showed disbelief and dismay when told that they might be working for 20 to 30 years of their lives whether or not they married. Most recent studies have indicated a growing awareness of women's employment expectations.

Another aspect of the information problem is experienced by a woman whose family and friends are not oriented toward education. They cannot provide her with the word-of-mouth kind of advice that might lead her to appropriate educational opportunities. These women are often unaware of the information sources that could tell them about available educational programs. And, as was mentioned in a previous section, the educational institutions themselves rarely make their programs known in the popular media.

Attitudes of friends. The degree to which a woman student's friends may understand the pressures she faces and respond to them with support for her may be highly related to her feeling able to continue in her studies. On the other hand, friends who have not been involved in continuing education themselves may not understand a woman's interest in returning to school and may discourage her from doing so. Husbands (1972) has commented that women in graduate school may meet disapproval from relatives and acquaintances for their nontraditional behavior.

Goodwin (1966) has explained how the interaction of factors in the familial, educational, and community environment can generate conflict and alter a woman's feelings of personal adequacy.

Community pressures. In many communities, especially suburban communities, there are strong pressures for women to be involved with home and family or in volunteer work. The woman who feels these pressures may feel, too, that breaking away from the expected woman's role, in order to continue her education, would place her at a disadvantage.

The problem of women's role in society is highly relevant to those who wish to encourage continuing education for women. While many persons are willing to see women assume new roles in society they are, at the same time, unwilling to let women depart from the old roles. Thus, the woman wishing further education often finds herself cast in a greater number of roles than her male counterpart. Goodwin (1966) quoted one woman with a doctorate as saying:

> Emotional drain of pressure to excel in all roles--student, mother, wife, educator, community worker, etc. is almost unbelievable and only the unusual person can survive.

Another woman in the same group said,

> The real difficulty for the academic woman lies in juggling all her "lives" because each segment (family, community, job, etc.) fails to appreciate the demands of the other segment.

Goodwin concluded "internalized societal pressures" operate against women in academic pursuits. She also concluded that "tolerance and support from all environments are needed if the women are to actualize their potential."

Alternatively, for many women, dissatisfaction with these same social groups may provide a stimulus for returning to school. Doty (1966) stated that more than half of the mature women in her sample gave dissatisfaction with club work

and related activities as a reason for returning to college. She suggested that the traditional women's activities do not meet the needs of many women. Ruslink (1969) reported that married women returning to school are strongly oriented toward self-improvement and social service.

These studies demonstrate that situational barriers tend to be much less amenable to change than the institutional barriers. However, education does offer some hope of changing the situational barriers. As society learns that women can fill other roles in addition to wife and mother, more parents and husbands may be supportive of women's interests in continuing education, more families may be willing to invest their financial resources in women's education, and social conditions may alter to make it easier for women to achieve their educational goals.

DISPOSITIONAL BARRIERS

The third and final major type of barrier to women's participation in education beyond high school is dispositional. This aspect of the problem will be dealt with only briefly in this review since a major purpose of this study is to locate barriers that might be readily changed through better educational planning. While dispositional barriers are probably equally as important as institutional and situational barriers in their effect on women, they are, for a large part, beyond the abilities of legislators to affect. However, to the degree that attitudes are taught in schools or can be modified by teaching, the dispositional barriers are integral to the concerns of this study.

Three different types of dispositional barriers will be covered: (1) attitudes, (2) motivation, and (3) personality.

Attitudes

Among the attitudes that serve as barriers to a woman in continuing her education are those related to woman's role in society, to education, and to intellectual activity.

Woman's role. A major psychological factor in the decision of a woman to continue education beyond the secondary school level is her perception of and preference for woman's role in society. Steinmann and Fox (1970) found that white women felt that men preferred home-oriented women but white men felt that the ideal woman was balanced between home and career. Black women felt that men preferred the woman balanced between home and career aspirations and black men agreed with this.

Women who aspire to a career do not substitute the work role for the more traditional one but are, instead, choosing an additional role (Turner 1964). Almquist and Angrist (1971) state that career aspirations of college women develop from a role model or reference group. Rossi (1967) found that career-oriented women date less, report less enjoyment of domestic tasks, and are more interested in reading, studying, and solo activities than the majority of their age cohort. Kagan and Freeman (1963) found that girls who reject traditional feminine sex-role behaviors have a higher IQ than girls who adopt the traditional roles.

Women are under pressure from society in general, from other women, and from men to assume the traditional role of wife and mother (Lewis 1969). On the other hand, Lewis felt that the educational system creates a pressure for women to become career oriented. He stated that a girl is "more likely to be able to successfully combine marital and professional responsibilities if she has had close acquaintance with women who have already done so successfully."

Morgan (1962) found that both career and noncareer women saw a larger discrepancy between "the ideal woman role and the feminine role than between the feminine career role and the masculine career role." She did not find any differences in role perceptions between career and noncareer women.

Edwards (1969) found that women who were marriage oriented, career oriented, or wished to compromise between these roles, were not different in the perceived values of "significant others," such as parents or husband. However, the relative importance of the significant others varied with the woman's own role decisions.

The difficulties of maintaining feminine identity while engaging in higher education were commented on by Bunting et al. (1970):

> The problem of maintaining feminine identity while engaging in serious intellectual pursuits is real for most women and is aggravated for those who find themselves in a minority in a male-dominated institution. As a minority, women are easily branded as different, often as superior intellects but inferior females. Few girls remain unaffected by such attitudes. Women students need an unusual sense of self to persevere in a predominantly male setting. As long as the ratio of men to women at the undergraduate level is high, the ratio itself will be an obstacle to full and equal participation of both men and women in the intellectual community.

Baumrind (1972) has described in some detail how socialization practices lead to sex-role stereotyping. She suggests that girls should be trained to become self-sufficient.

Attitudes toward education and intellectual activity. Another and related problem is the ambivalence of women about education. Rossi (1967) addressed the problem of ambivalence in women and concluded:

> If the high school and college years are a period of life when we wish to see the fullest possible stretching of the human potential in our young people, they should be able to stretch more than their minds. Their feelings must also be stretched, tested against feelings contrary to their own, and guided when necessary.

> To do this where the family roles of their future adulthood are concerned will help as no course can, in the confrontation of young women with their real inner selves and at an age before they have taken on family responsibilities instead of afterward, on the basis of which they could work through their own personal decision about what role configuration is best for them.
>
> Women, and those concerned with the lives of women, should be active in a critical appraisal of our occupational system. We should be as concerned for the quality and content of the work situation as for the productivity of an organization, whether this be bicycles, degrees, laws or detergent soap. It should be as important to create work contexts that are congenial to the human spirit and human need for contact with others as to improve the physical comfort by better lighting, safer tools and a pleasing color scheme. We should be able to work for the pleasure we derive from the work itself, and from our associates at work, not merely for the quantity of our output.
>
> In short, American men and women have much soul and mind searching to do about the lives we live at work and at home, and this will require breaking the confines of our own time and place, and attempting the difficult task of keeping the best of our heritage from the past, being critical of what exists and open to innovation, and by so doing, helping to forge a new future.

Bright women often feel inhibited in classroom discussions because they are viewed as bizarre if they make original comments (Tobias 1971). "Women students have been rewarded in high school for being passive, dependent, and avoiding conflict. Meanwhile, aggressiveness, active learning and independence are rewarded in college, so they are constantly battling the old values against the new." She added that the college environment favors a style of teaching and learning designed for male students, rewarding aggressiveness, independence, and the ability to cope with conflict.

The ambivalences of women about combining career and family are most acute during the years between 18 and 25, according to Kenniston and Kenniston (1964). At a time when men are preparing for a career, women are likely to be seeking "affirmation of their femininity." Graham (1970) has said:

> Some young women are able to do graduate work and to do it well in these years, but few pass through this period without severe qualms about the desirability of planning for a demanding professional life. Men, too, are beset by a variety of doubts during these years, but for the majority of them, at least, academic success does not bring substantial psychic problems as it does for women...To expect young women to buck the cultural standards for females is to demand of them much more than is expected of any man attempting to succeed in his field, since men are supposed to be successful.

The male definition of academia results in ambivalence in girls, according to Riesman (1965). He stated that this ambivalence often emerges in feelings of personal inadequacy, and girls therefore conclude "that they lack ability in various fields when, in fact, what they lack is the ability to structure their thinking in the way that men have defined."

Motivation

Among the motivational barriers to the continuing education of women are level of aspiration and fear of success. In addition, there are sex differences in the motivation to enter college; men consider career and vocation the primary reasons for attendance while women give more importance to intellectual pursuits and liberal education (Husbands 1972).

Level of aspiration. There is still relatively little understanding of what motivates women (or men) and of the effects of background factors on their development.

Douvan (1970) stated that

> needs for love and interpersonal intimacy are dominating motives in women, that women define themselves and derive self-esteem largely by their relationship to others, and that anything that threatens those crucial relationships--whether it be individual success, competitiveness, or personal standards regarding sex--will create conflict and anxiety in the woman and will be avoided in reality or by means of psychological denial. If a young woman's plans for personal achievement

> endanger her attractiveness to male peers, she is likely to change her plans toward more modest and more traditionally feminine goals. If her personal background and life history have made her feel that premarital sex is either wrong or worrisome because of the risk of being deserted, the girl will deny this history and her negative feelings, if saying no to a boy means losing him. Any assertion of her autonomous self is likely to be abandoned if it is pitted against a love relationship, even when the relationship has little guarantee of permanence.
>
> That girls count the self so lightly in their scale of values cannot fail to distress those of us who are interested in women's rights and equal opportunity--for that matter, anyone who has a stake in any human values. The studies indicate that the girls themselves are distressed by it, that they buy security in relationships at a significant cost in anxiety, guilt, and damaged self-esteem.

Recent studies by Almquist and Angrist (1970, 1971), Astin (1970), Astin and Myint (1971), Eyde (1970), and others have focused on the career development of women. Much of this material is directly relevant to the study of barriers to women's continuing education. Zytowski (1969) has adapted existing theories of vocational development to the needs of women. Bardwick (1971) has summarized the research on achievement motivation and its relation to career development. Sundheim (1963) found that women majoring in science had the highest achievement motivation; those majoring in education had a high need for affiliation. Taylor (1964) found that "the achiever seems to fit the male stereotype while the underachiever bears a distinct resemblance to the typical female stereotype." Davis and Olsen (1965) found that, from college entry to graduation there was no increase in professional involvement, in fact there was some deterioration. Studies of Vassar alumnae (Sanford 1967) indicated that those with strong professional commitments were willing to stay home when children were young and then re-enter the labor market; the family took precedence over their own ambitions. Bardwick (1971) expressed the opinion that successful marriage relieves anxieties about femininity and affiliation so that achievement motives

established in childhood may resurface 10 or 15 years after college when the traditional role demands decline.

The desire to know more and thus enjoy personal fulfillment was the most often stated reason given by women for obtaining the doctorate, according to Mitchell (1969). But ambition for recognition and for achievement of leadership are also important. Doty (1966) found unfulfilled desire for knowledge a motive for mature women's return to college.

"The factors in the college context which seem most likely to affect women's aspirations are: relationships with peers and faculty, sex composition of enrollment, and curriculum offerings of the school" (Husbands 1972).

Fear of success. Horner's (1970) work has pointed out that women's avoidance of success acts as a psychological barrier to their achievement. "When success is likely or possible, these young women, threatened by the negative consequences [being unattractive to men] they expect to follow success, become anxious, and their positive achievement strivings become thwarted." According to Horner, these negative consequences result from a social view of femininity and competitive achievement as mutually exclusive ends so that "each step forward as a successful American, regardless of sex, means a step back as a woman (Mead 1949)." When the motive to avoid success is strong, the abilities and intellectual potential are unfulfilled and, as a consequence, feelings of frustration, hostility, aggression, bitterness, and confusion may emerge. Horner has stated that the motive to avoid success is "a latent, stable, personality disposition, acquired early in life in conjunction with sex, sex role standards, and sexual identity." She has concluded, "Regardless of how many legal and educational barriers to achievement in women we remove, unless ways are found to prevent the motive to avoid success from being aroused and to keep its influence at a minimum, our

society will continue to suffer a great loss in both human and economic resources."

Horner is not the only researcher to note this phenomenon. Crandall, Katkovsky, and Preston (1962) found that, for boys, IQ score was correlated with expectation of success, but that the brighter the girl the less well she expected to do. Walberg (1969) said that bright girls may hold back intellectually in order to conform to the feminine role and to gain social approval.

Personality

The entire socialization process of women encourages the development of a personality which may be at odds with the characteristics needed for obtaining education. The personality characteristics which may serve as especially strong barriers are dependence, passivity, and feelings of inferiority.

Dependence. Girls are characteristically more dependent than boys (Bardwick 1971). The college girls whom Bardwick interviewed are reported as perceiving masculinity as independent and femininity as dependent. The author felt that "for girls the greatest threat is loss of love, and therefore they will be less independent than boys." The urge to be independent is almost exclusively a masculine goal, according to Douvan and Adelson (1966). "Up until the age of 18 girls showed no drive toward independence, felt no need to confront authority in rebellion, and made no insistence on their right to form and hold independent beliefs and controls."

Passivity. In most cultures, feminine-passive and masculine-active behaviors are considered normal (Deutsch 1963). Some of the passivity in women may be related to sociological variables. Kagan and Moss (1962) found that daughters of well-educated parents were more verbally aggressive and less conforming.

Inferiority feelings. Tobias (1971) has discussed the problem of inferiority feelings in females as a barrier to their academic success. She stated that women are taught that they are inferior to men. In referring to the often cited work by Goldberg (1968), in which college students were asked to evaluate identical essays and in which those purportedly authored by a woman were undervalued, she pointed out the students' reluctance to accept as a fact that something good was written by a female. "Imagine what this kind of response does to the female teacher."

Groth (1969) studied the Maslovian needs of gifted girls and women. She concluded that females were chiefly concerned with "love and belongingness" from about age 14 to about age 40. After this time of life their "self-esteem" and "self-actualization" levels increased.

> In order to avoid social criticism... many gifted women conform to societal values of femininity which include the belief that women are emotionally and intellectually inferior to men. Gifted girls and women learn to appear dumb. However, the role playing of feigned stupidity is frustrating since it denies cognitive fulfillment. Somewhere around the age of forty, the level of frustration mounts to the motivation point. By this age, the love and belongingness needs (child bearing and so forth) have been relieved or satiated. It is at this point that the suppressed cognitive needs (as expressed in esteem, careers, and self-actualization) indicated at age fourteen, bubble to the surface.

Until social changes are made, it is unlikely that a large proportion of women will view themselves without the psychological doubts described above. Bardwick (1971) has analyzed the consequences to women:

> From a psychologist's point of view, many of the problems besetting women can be understood as internal phenomena--motives, anxieties, guilts, fears, low self-esteem. But many of these negative feelings result from society's preference for and reward of occupational achievement and its inhibition of women through legislation, hiring practices, differential pay and prestige,

> the lack of child-care facilities, and so on. This inevitably leads to anger, especially among aware and educated women....It seems obvious that society cannot educate large segments of its population to want to and be able to participate in the larger culture and then effectively prohibit their participation without discontent.

CONCLUSIONS

In general, the scope of the studies of barriers to women's participation in post-secondary education is limited. Most studies were restricted to a single institution and included only a small number of subjects. The majority of studies have focused on college or graduate school education; other types of post-secondary education (such as business or technical schools) were rarely discussed.

Since many of the same problems recur from study to study, it is possible to conclude that these conditions do represent widespread barriers to women's education. However, when a condition is mentioned by only one or two authors, it is difficult to determine if the conditions described are peculiar to a few institutions or more widespread. Similarly, in the case of situational and dispositional barriers, it is difficult to determine if the condition described occurs rarely or if the authors had unusual insight into the more subtle problems facing women.

A number of studies have given special attention to the problems faced by mature women returning to school to complete an interrupted education. However, little effort has been made to compare the problems of the mature woman student with those of younger women whose education has not been discontinuous. Neither has there been an effort to compare the educational problems of mature women with those faced by mature men who choose to change their careers.

There is an obvious need for one or more studies of national scope investigating the barriers to women's continuing education. Until such studies are done, it will be impossible to ascertain the extent to which the barriers mentioned in the more limited studies actually exist. Additionally, there is currently a very rapid change in the field of higher education. Many of the practices, which existed a few years ago and are discussed in this review, may no longer be in effect. There have been several new pieces of legislation which may have removed or may soon remove many of these barriers. Again, a national study is needed to establish a benchmark against which future progress may be evaluated.

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